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ABSTRACT

This document contains two sections: implementation of the performance-based Occupational Affective Behavior Analysis (OABA), and supporting research. Section 1 presents OABA, an analytic procedure designed to identify those affective behaviors important to success in an occupation, and gives directions on how to implement the procedure. The Coordinator Manual contains directions to be followed by the coordinator of the analysis. It is organized around the six steps the coordinator should follow in conducting the analysis: (1) identify the occupation to be analyzed; (2) identify experts and invite their cooperation; (3) administer OABA to obtain a brainstormed list from each expert; (4) develop a group composite list of affective behaviors from experts' original brainstormed lists; (5) obtain importance ratings for each behavior from experts; and (6) generate a list of important critical affective behaviors for the occupation. The manual contains samples of all forms needed to complete the process. The instrument is designed to be sent to occupational experts to obtain brainstormed lists of affective behaviors important to success. The manual and instrument are presented in a form that can be reproduced. Section 2 contains a report of the process used to develop OABA and the related research supporting its validity. It describes the validation of OABA by experts in the fields of cosmetology and machine shop. Appendixes to Section 1 include sample instruments and worksheets; appended to Section 2 are a 37-item bibliography, sample instruments, and results of the cosmetology and machinist pilot studies. (YLB)

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Performance-Based Occupational Affective Behavior Analysis (OABA)

Implementation and Supporting Research

Minnesota Research and Development Center
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Performance-Based Occupational Affective Behavior Analysis (OABA)

Implementation and Supporting Research

by

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January 1992

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PREFACE

Performance-Based Occupational Affective Behavior Analysis (OABA) is an efficient process for identifying lists of critical affective behaviors judged to be important to success in an occupation. Two pilot tests of the analysis procedures indicate that both OABA and the OABA Coordinator Manual are effective and efficient for managing the collection of data to develop validated lists of affective behaviors for a specific occupation. The affective behaviors are stated in a behavioral format similar to tasks. This facilitates the development of curricula designed to teach these behaviors.

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OVERVIEW

This document contains two distinct sections:

Section 1--Implementation of the Performance-Based Occupational Affective Behavior Analysis (OABA)

Part 1: Coordinator Manual which is identified with center page numbers (e.g., C, C-1, C-2, etc.)

Part 2: OABA Instrument which is identified with center page numbers (e.g., I, I-1, I-2, etc.)

Section 2--Supporting Research of the Performance-Based Occupational Affective Behavior Analysis (OABA)

The research was conducted to develop procedures to identify job specific affective behaviors as a basis for curriculum development. The first section of this document presents those procedures. It contains the manual for applying OABA as well as the OABA Instrument. Both are presented in a form that can be reproduced. Two sets of page numbers appear on the manual and instrument. The page numbers in the lower right-hand corner may be removed during duplication. The OABA materials are copyrighted but may be reproduced if reproduced in their entirety and a complete bibliographic citation is included.

Section 2 of this document contains a report of the process used to develop OABA and the related research supporting its validity. It is written as a standard research publication.

Performance-based OABA is the result of three years of research into the identification of occupationally specific affective behaviors necessary for success in an occupation.

The specific goals of this research were to:

1. Develop a technique which would allow instructors, trainers, and/or curriculum developers to efficiently identify and record affective behaviors (in a behavioral format) relative to a specific job.
2. Develop a technique to synthesize lists of brainstormed affective behaviors generated by individual experts into a mutually agreed upon composite list as a basis for curriculum development.

Most previous studies identified in the literature that attempted to identify affective behaviors important to job success required complex research methodologies that were beyond the scope of typical curriculum developers or instructors. These studies often took a long time, required group meetings which were very expensive, or produced results without job validation.

OABA enables the typical instructor, trainer, or curriculum developer to identify and validate a list of prioritized affective behaviors with the assistance of a group of experts. The process takes approximately 5 hours of coordination time and 5 hours of time from each of the participating experts.

Two pilot studies were conducted in the fields of cosmetology and machine shop to develop and validate the OABA process.

OABA is founded on performance-based instructional design principles. Performance-based instructional design is an integrated system for developing and evaluating instruction, and its aim is to ensure the performance capability of learners (Pucel, 1989, p. 16). A first stage in the development of such instruction is to identify content to be taught through occupational or content analysis. The primary focus of such analysis is to identify what people will be expected to do (Pucel, p. 34). OABA was designed to analyze affective behaviors important to successful performance in an occupation.

OABA contains six steps:

1. Identify the occupation to be analyzed
2. Identify a group of experts and invite their cooperation
3. Administer OABA to obtain a brainstormed list from each expert
4. Develop a group composite list of affective behaviors after receiving the original brainstormed lists from the occupational experts
5. Obtain importance ratings for each behavior from individual experts
6. Generate a list of important critical affective behaviors for the occupation

Both OABA and the OABA Coordinator Manual have been field tested and proven to be effective. They were field tested with a highly people-oriented occupation (cosmetology) and a highly thing-oriented occupation (machinist). A summary of the research is presented in Section 2. A thorough review of the literature, a description of the development of the OABA materials, and the cosmetology pilot results are presented in the MRDC publication, The Identification and Stability of Occupationally Specific Affective Behaviors, (Pucel, Jensrud, & Damme, 1990). The machinist study results are contained in the unpublished report, Analyzing Occupationally Specific Affective Behaviors for Curriculum Development, (Pucel, Warner, & Jensrud, 1990). A discussion of how affective behaviors identified through OABA can be converted into curriculum and lesson plans can be found in the text, Performance-Based Instructional Design, D.J. Pucel, 1989, McGraw-Hill Book Company, New York.

SECTION 1
IMPLEMENTATION OF THE PERFORMANCE-BASED OCCUPATIONAL AFFECTIVE BEHAVIOR ANALYSIS (OABA)

This section presents Performance-Based Occupational Affective Behavior Analysis (OABA) and directions on how to implement it. OABA is an analysis procedure designed to identify those affective behaviors that are important to success in an occupation. OABA has two parts:

1. **OABA Coordinator Manual** which contains directions to be followed by the person in charge of coordinating the analysis (pp. 5-31).
2. **OABA Instrument** which is sent to occupational experts to obtain brainstormed lists of affective behaviors important to success (pp. 33-53).

Those interested in an overview of the analysis procedures should read the Coordinator Manual which provides the step-by-step procedure for conducting the analysis. Those interested in the research base that supports OABA should read Section 2 of this document entitled Supporting Research.

Before implementing OABA, it is suggested that users thoroughly review the OABA Coordinator Manual and the OABA Instrument. The person designated as the analysis coordinator completes each of the following six steps while conducting the analysis:

1. Identify the occupation to be analyzed
2. Identify a group of experts and invite their cooperation
3. Administer OABA to obtain a brainstormed list from each expert
4. Develop a group composite list of affective behaviors after receiving the original brainstormed lists from the occupational experts
5. Obtain importance ratings for each behavior from individual experts
6. Generate a list of important critical affective behaviors for the occupation

Occupational experts complete the following six steps as they develop brainstormed lists of affective behaviors using the OABA Instrument. Later the behaviors are validated or eliminated based on agreement among the experts.

1. Define affective behaviors (as opposed to cognitive and psychomotor behaviors)
2. Identify behaviors in the occupation to be analyzed
3. Define functions in a performance format
4. Record functions
5. Define affective behaviors in a performance format
6. Record affective behaviors

Performance-Based Occupational Affective Behavior Analysis (OABA)

Coordinator Manual

by

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January 1992

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INTRODUCTION

This manual is organized around each of the six steps the coordinator should follow in conducting the analysis. It also contains samples of all the forms that are needed to complete the process. Occupational Affective Behavior Analysis (OABA) is designed to be implemented by a coordinator who gathers information from occupational experts. The OABA Coordinator Manual and the OABA Instrument contain all of the materials needed to implement OABA. The entire process can be accomplished through the mail and takes approximately 5 hours of time for each expert, 5 hours for the coordinator, and 2 hours of clerical support. The procedure can be completed in 6 to 8 weeks.

By carefully following the procedures, a validated, occupationally specific list of affective behaviors useful in curriculum development for vocational technical education or training in business and industry can be produced. Before getting started, you should read through the OABA Instrument which experts are expected to complete. This will help you to understand what you will ask others to do for you.

Why was OABA developed? As we move into the information age and more people move into service occupations, it becomes increasingly apparent that it is important to revise curriculum development procedures to include affective skills in occupational preparation. OABA was developed to meet this need. It is an efficient tool for identifying lists of critical affective behaviors judged to be important to success in an occupation.

An overview of the research supporting OABA can be found in Section 2 of this complete report (Performance-Based Occupational Affective Behavior Analysis [OABA], Pucel, Jensrud, Damme & Warner, 1991). A thorough review of the literature and a description of the development of the OABA materials are presented in the MRDC publication The Identification and Stability of Occupationally Specific Affective Behaviors, (Pucel, Jensrud, & Damme, 1990).

OABA has been successfully field tested and has proven to be effective and efficient in managing the collection of data to develop validated lists of affective behaviors regarding a specific occupation. The behaviors are stated in a behavioral format similar to tasks. This allows for the development of focused curriculum designed to teach those behaviors.

The process used in OABA for identifying affective behaviors was adapted from the Performance-Based Instructional Design (PBID) System (Pucel, 1989). That system is a comprehensive curriculum development tool that educators and trainers can use to determine and teach the behaviors needed by a person to perform a given occupation.

Affective behaviors are defined as emotional tones toward something. They are often expressed as feelings, attitudes, and habits. They are recognized through body language (e.g., smile vs. frown), the

selection of words (e.g., you look good vs. you look dumb), the way words are communicated (e.g., conversational voice vs. loud, accusing voice), and other observable traits (Pucel, 1989).

IDENTIFYING THE OCCUPATION TO BE ANALYZED

The occupation to be analyzed must be clearly identified in order for all those involved with the analysis to clearly understand the basis of the analysis. The occupation becomes the target of the analysis (e.g., auto mechanic, secretary). If the occupation is not clearly defined, the experts who will provide input may envision different roles when suggesting affective behaviors. It is recommended that the Dictionary of Occupational Titles (DOT) (U.S. Department of Labor, 1991) description be used. Describe the occupation so the focus of the analysis is clear. After choosing the occupation, write the name of the occupation in the blank space provided in the OABA Instrument on page I-4. It is important to always refer to this description when information about the analysis is provided in reports and correspondence.

IDENTIFYING A GROUP OF EXPERTS AND INVITING THEIR COOPERATION

Identifying Experts

The next step is to choose experts who will help you complete the OABA process. Selection qualifications should include experience in the occupation and a willingness to commit time to the process. Approximately 10 experts should be selected. Instructors within the given field often make excellent experts if they have had occupational experience in the field within the past 5 years. They not only have experience in the field but also can understand the curriculum implications of the project. Employers or supervisors who have work experience in the field also may be selected. Selecting some instructors and some people from business and industry can provide different perspectives and can increase the perceived validity of the process. In any case, the experts should have had recent experience in the occupation or be supervising people in the occupation.

Inviting Expert Cooperation

The identified experts may be contacted either by letter or telephone to invite them to cooperate in OABA. The first contact should introduce OABA, describe its objectives, provide a description of the occupation to be analyzed, and request participation in the process. Even if the first contact is by phone, a letter should be sent. Appendix 1C, at the end of this Coordinator Manual, contains a sample OABA Expert Invitation Letter. Each expert who agrees to participate should be asked to complete the OABA Participation Form (see Appendix 2C). This form provides all of the information needed for further contacts. The blank lines in italics on the sample letter and form should be completed in relation to your specific situation. Your introductory letter should specify a date by which the

participation form must be returned; a self-addressed, stamped envelope should be enclosed to facilitate participation.

If forms are not returned within a week after the deadline date, call those who have not returned their forms. Additional letters and forms may need to be sent to some people again. If at least 10 experts do not agree to participate, you may wish to select additional experts.

ADMINISTERING OABA TO OBTAIN A BRAINSTORMED LIST OF AFFECTIVE BEHAVIORS FROM EACH EXPERT

The OABA Instrument instructs each expert on how to generate a brainstormed list of occupationally specific affective behaviors important to success in the occupation selected. When it is mailed to the experts, it should be accompanied by a cover letter (see Appendix 3C) that reviews the process and requests the return of an OABA Worksheet within two weeks. See Appendix 4C for an example of what information might be contained on an OABA Worksheet for the occupation cosmetology. Fill in the blanks on the cover letter with the appropriate information for your situation. Mail the letter, the OABA Instrument, and a self-addressed, stamped envelope to the experts.

OABA asks each expert to develop and return a brainstormed list of affective behaviors required for success in the occupation on the OABA Worksheet. The experts should keep the OABA Instrument so they will be able to refresh their memories on the definition of affective behaviors when they are asked to rate the importance of the behaviors later. Only the OABA Worksheet should be returned during this phase.

Even though experts are asked to return the worksheets in 2 weeks, a follow-up phone call in 1 week can facilitate returns. Let the experts know you are still interested, and offer to help them solve any problems they are having with the materials.

Developing a Group Composite List of Affective Behaviors

When the completed OABA Worksheets have been returned by the experts, a total list of all brainstormed affective behaviors generated by all experts should be compiled using the following procedure:

1. Copy the behaviors contained on each individual OABA Worksheet onto the OABA Importance Rating Scale (see Appendix 5C). Review the format of each behavior statement as you copy it. Experts should have written their affective behaviors using the following format:

1. Action Verb	+	2. Object Acted Upon	+	3. Modifying Information

The first component is a verb in the form of an action verb without any endings (e.g., "ing" or "s"). The second component is the object acted upon. To identify the object, select the verb and ask yourself the question to "what" or "whom." The third component is modifying information and is optional. (If you would like more information, read the section on "Define Affective Behaviors in a Performance Format" in the OABA Instrument.) Only add modifying information if one of the experts has listed it on the worksheet.

2. As you write the statements, you must conform to the above format. **If you need to reformat the behavior, do not change the verb, object, or modifying information.**
3. As you transfer each affective behavior statement from each expert's worksheet onto the OABA Importance Rating Scale, check it off on that expert's worksheet.
4. Complete this process for each expert's OABA Worksheet and make sure that every behavior on each of the worksheets is checked off.
5. Make sure all the affective behaviors are listed. Leave a behavior off only if it is already on the list. **If there is any doubt, add the behavior to the list.**
6. A sample of a partially completed OABA Importance Rating Scale is presented in Figure 1C.

FIGURE 1C

Sample OABA Importance Rating Scale

A/N	Behaviors	Ratings				
___	1. Care for tools	1	2	3	4	5
___	2. Respect safety rules	1	2	3	4	5
___	3. Maintain client support	1	2	3	4	5
___	4. Etc.	1	2	3	4	5
___	5. _____	1	2	3	4	5

OBTAINING IMPORTANCE RATINGS FOR EACH BEHAVIOR FROM INDIVIDUAL EXPERTS

The OABA Importance Rating Scale is used to obtain ratings regarding the importance of each of the brainstormed affective behaviors suggested by the experts. Average ratings across the experts are then used to develop a prioritized list of affective behaviors important to success in the occupation. The OABA Importance Rating Scale and a cover letter (see Appendix 6C) should be mailed back to each expert. The experts are instructed to indicate if each behavior is an affective behavior, and if it is, how

important it is to success in the occupation. Include a self-addressed, stamped envelope to increase the return rate.

The experts should be given 2 weeks to rate the behaviors. If the rating scales are not returned by that time, call the experts to encourage their cooperation. All returns should be collected before going any further.

GENERATING A LIST OF IMPORTANT CRITICAL AFFECTIVE BEHAVIORS FOR THE OCCUPATION

Analyzing Expert Ratings

Analysis of the responses can begin after the OABA Importance Rating Scales have been received. Analysis is done using the mean (average) rating across experts for each behavior. The mean rating for a given behavior is calculated by adding the ratings for a given behavior across all experts and dividing the sum by the number of experts in your group. Assign a rating of zero for an expert who rated a behavior "N" (not an affective behavior).

For example, if you have a group of 10 experts who rated the first affective behavior 0, 2, 0, 3, 3, 4, 4, 5, 5, and 5, the sum would be 31. You would then divide 31 by 10 (number of experts in your sample) and arrive at a mean of 3.1. Follow this procedure for each behavior on the rating scale.

Developing a Prioritized List of Occupationally Specific Affective Behaviors

After the mean rating has been calculated for each behavior, determine which behaviors are considered to be the most important in performing the chosen occupation. Those behaviors which have a mean below 3.5 on the OABA Importance Rating Scale should be eliminated because they were not seen as being at least "often important" to success on the job by the group of experts. Because the mean in the above example was 3.1, you would eliminate that behavior.

The affective behaviors with means above 3.5 should then be placed in priority rank order to determine which of the affective behaviors are most important. The behavior with the largest mean rating should be listed first, the next largest mean rating second, etc. This final prioritized list of affective behaviors can be used as a basis for curriculum development. It represents a list of affective behaviors that has been validated by experts as important to success in the occupation you have chosen to analyze.

APPENDIX 1C

SAMPLE EXPERT INVITATION LETTER

(date)

(name of expert)
(address)
(address)

Dear *(name of expert)* ,

As you know, more people lose their jobs because of affective behavior problems than due to lack of skills. Therefore, instructional programs need to teach not only manual and thinking skills necessary to perform adequately but also the necessary affective behaviors.

I am asking for your cooperation in identifying affective behaviors which are critical components to success in the role of *(enter the occupation and provide an expanded description if needed)*. You have been identified as an expert in this area. The goal is to develop and evaluate a list of occupationally specific affective behaviors which can be used by instructors as a basis for curriculum development. Your cooperation will require two types of input:

1. You will be sent a document called Occupational Affective Behavior Analysis (OABA) Instrument. It is an easy to follow step-by-step process which asks you to "brainstorm" a list of affective behaviors people should have in order to perform as a *(enter the occupation)* .

2. Later, you will be asked to rate the importance of affective behaviors generated from your input and the input of other experts participating in the project.

I would appreciate your participation in this process. If you are willing to work with me, please complete and mail the enclosed participation form to me by *(enter the date)* . A self-addressed, stamped envelope is provided for your convenience.

Sincerely,

(your name)
(your title)

Attachment:

APPENDIX 2C

THE OCCUPATIONAL AFFECTIVE BEHAVIOR ANALYSIS PARTICIPATION FORM ON THE FOLLOWING PAGE CAN BE DUPLICATED AND SENT TO POTENTIAL PARTICIPANTS.

OCCUPATIONAL AFFECTIVE BEHAVIOR ANALYSIS PARTICIPATION FORM

_____ Yes, I will participate in the project.

_____ No, I would prefer not to participate.

Please fill in your name and address and mail this form back, whether you are able to participate or not. Thank you.

Name: _____

Address: _____

City/State/Zipcode: _____

Phone: _____

A self-addressed, stamped envelope is provided for your convenience.

APPENDIX 3C

SAMPLE OABA INSTRUMENT COVER LETTER

(date)

(name of expert)
(address)
(address)

Dear *(name of expert)*,

Thank you for agreeing to participate in the Occupational Affective Behavior Analysis (OABA) of *(enter the occupation)* being conducted through *(enter your institution)*. The OABA Instrument which I said I would send to you is enclosed. It includes:

1. A process for identifying affective behaviors
2. Worksheets on which to record your analysis of affective behaviors associated with *(name of occupation)*
3. Examples of occupations which have been analyzed using this procedure
4. A self-addressed, stamped envelope in which to return your analysis

Remember, the goal is to generate a "brainstormed" list of affective behaviors necessary to perform successfully as a *(name of occupation)*. It is important that you read the OABA Instrument completely and carefully and follow the directions step-by-step. No one will judge whether the behaviors you list are right or wrong, so list all ideas which come into your mind.

Keep your OABA Instrument for later use and reference. Send only the OABA Worksheet back to me by *(date)*. We will be contacting you shortly to complete phase two.

Sincerely,

(your name)
(your title)

Enclosure:

APPENDIX 4C

SAMPLE OABA WORKSHEET

OCCUPATION: Cosmetologist

FUNCTIONS

AFFECTIVE BEHAVIORS VERB|OBJECT|MOD.INFO	Operate Appointment Desk	Identify Client Needs	Sanitize Implements/Equipment	Communicate with Clients and Employers	Perform Retail Sales	Maintain Client Records								
Treat Clients with Respect	X	X		X	X									
Respect Clients' Feelings During Complaints	X	X												
Care for Documents	X					X								
Respect Safety Rules			X											
Follow Manufacturer Instructions			X											
Care for Tools			X											
Maintain Client Rapport	X	X		X	X									
Attend to Details	X	X	X	X	X	X								
Accept Client/Co-worker/ Employer Suggestions	X	X		X	X									
Display Ethical Behavior in Salon	X	X		X	X									

APPENDIX 5C

THE OCCUPATIONAL AFFECTIVE BEHAVIOR ANALYSIS IMPORTANCE RATING SCALE ON THE FOLLOWING PAGES CAN BE FILLED OUT, DUPLICATED, AND SENT TO THE EXPERTS IN YOUR ANALYSIS.

OABA IMPORTANCE RATING SCALE

Name: _____ Date: _____

INSTRUCTIONS:

1. Before rating this list of behaviors, please refer to your OABA Instrument previously sent to you to refresh your memory about the differences between psychomotor, cognitive, and affective behaviors. With these definitions in mind, read each behavior and first label it in the left "A/N" column as either...

   N = Not an affective behavior

   or

   A = an Affective behavior.

2. Disregard those behaviors labeled "N."

3. Rate the importance of each of the affective behaviors (those labeled "A") using the following scale:

   1 never important to success in the role
   2 seldom important to success in the role
   3 occasionally important to success in the role
   4 often important to success in the role
   5 always important to success in the role

A/N		Behaviors	Ratings
___	1.	_____	1 2 3 4 5
___	2.	_____	1 2 3 4 5
___	3.	_____	1 2 3 4 5
___	4.	_____	1 2 3 4 5
___	5.	_____	1 2 3 4 5
___	6.	_____	1 2 3 4 5
___	7.	_____	1 2 3 4 5
___	8.	_____	1 2 3 4 5
___	9.	_____	1 2 3 4 5
___	10.	_____	1 2 3 4 5
___	11.	_____	1 2 3 4 5
___	12.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 13.	_____	1 2 3 4 5
___ 14.	_____	1 2 3 4 5
___ 15.	_____	1 2 3 4 5
___ 16.	_____	1 2 3 4 5
___ 17.	_____	1 2 3 4 5
___ 18.	_____	1 2 3 4 5
___ 19.	_____	1 2 3 4 5
___ 20.	_____	1 2 3 4 5
___ 21.	_____	1 2 3 4 5
___ 22.	_____	1 2 3 4 5
___ 23.	_____	1 2 3 4 5
___ 24.	_____	1 2 3 4 5
___ 25.	_____	1 2 3 4 5
___ 26.	_____	1 2 3 4 5
___ 27.	_____	1 2 3 4 5
___ 28.	_____	1 2 3 4 5
___ 29.	_____	1 2 3 4 5
___ 30.	_____	1 2 3 4 5
___ 31.	_____	1 2 3 4 5
___ 32.	_____	1 2 3 4 5
___ 33.	_____	1 2 3 4 5
___ 34.	_____	1 2 3 4 5
___ 35.	_____	1 2 3 4 5
___ 36.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 37.	_____	1 2 3 4 5
___ 38.	_____	1 2 3 4 5
___ 39.	_____	1 2 3 4 5
___ 40.	_____	1 2 3 4 5
___ 41.	_____	1 2 3 4 5
___ 42.	_____	1 2 3 4 5
___ 43.	_____	1 2 3 4 5
___ 44.	_____	1 2 3 4 5
___ 45.	_____	1 2 3 4 5
___ 46.	_____	1 2 3 4 5
___ 47.	_____	1 2 3 4 5
___ 48.	_____	1 2 3 4 5
___ 49.	_____	1 2 3 4 5
___ 50.	_____	1 2 3 4 5
___ 51.	_____	1 2 3 4 5
___ 52.	_____	1 2 3 4 5
___ 53.	_____	1 2 3 4 5
___ 54.	_____	1 2 3 4 5
___ 55.	_____	1 2 3 4 5
___ 56.	_____	1 2 3 4 5
___ 57.	_____	1 2 3 4 5
___ 58.	_____	1 2 3 4 5
___ 59.	_____	1 2 3 4 5
___ 60.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 61.	_____	1 2 3 4 5
___ 62.	_____	1 2 3 4 5
___ 63.	_____	1 2 3 4 5
___ 64.	_____	1 2 3 4 5
___ 65.	_____	1 2 3 4 5
___ 66.	_____	1 2 3 4 5
___ 67.	_____	1 2 3 4 5
___ 68.	_____	1 2 3 4 5
___ 69.	_____	1 2 3 4 5
___ 70.	_____	1 2 3 4 5
___ 71.	_____	1 2 3 4 5
___ 72.	_____	1 2 3 4 5
___ 73.	_____	1 2 3 4 5
___ 74.	_____	1 2 3 4 5
___ 75.	_____	1 2 3 4 5
___ 76.	_____	1 2 3 4 5
___ 77.	_____	1 2 3 4 5
___ 78.	_____	1 2 3 4 5
___ 79.	_____	1 2 3 4 5
___ 80.	_____	1 2 3 4 5
___ 81.	_____	1 2 3 4 5
___ 82.	_____	1 2 3 4 5
___ 83.	_____	1 2 3 4 5
___ 84.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 85.	_____	1 2 3 4 5
___ 86.	_____	1 2 3 4 5
___ 87.	_____	1 2 3 4 5
___ 88.	_____	1 2 3 4 5
___ 89.	_____	1 2 3 4 5
___ 90.	_____	1 2 3 4 5
___ 91.	_____	1 2 3 4 5
___ 92.	_____	1 2 3 4 5
___ 93.	_____	1 2 3 4 5
___ 94.	_____	1 2 3 4 5
___ 95.	_____	1 2 3 4 5
___ 96.	_____	1 2 3 4 5
___ 97.	_____	1 2 3 4 5
___ 98.	_____	1 2 3 4 5
___ 99.	_____	1 2 3 4 5
___ 100.	_____	1 2 3 4 5
___ 101.	_____	1 2 3 4 5
___ 102.	_____	1 2 3 4 5
___ 103.	_____	1 2 3 4 5
___ 104.	_____	1 2 3 4 5
___ 105.	_____	1 2 3 4 5
___ 106.	_____	1 2 3 4 5
___ 107.	_____	1 2 3 4 5
___ 108.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 109.	_____	1 2 3 4 5
___ 110.	_____	1 2 3 4 5
___ 111.	_____	1 2 3 4 5
___ 112.	_____	1 2 3 4 5
___ 113.	_____	1 2 3 4 5
___ 114.	_____	1 2 3 4 5
___ 115.	_____	1 2 3 4 5
___ 116.	_____	1 2 3 4 5
___ 117.	_____	1 2 3 4 5
___ 118.	_____	1 2 3 4 5
___ 119.	_____	1 2 3 4 5
___ 120.	_____	1 2 3 4 5
___ 121.	_____	1 2 3 4 5
___ 122.	_____	1 2 3 4 5
___ 123.	_____	1 2 3 4 5
___ 124.	_____	1 2 3 4 5
___ 125.	_____	1 2 3 4 5
___ 126.	_____	1 2 3 4 5
___ 127.	_____	1 2 3 4 5
___ 128.	_____	1 2 3 4 5
___ 129.	_____	1 2 3 4 5
___ 130.	_____	1 2 3 4 5
___ 131.	_____	1 2 3 4 5
___ 132.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 133.	_____	1 2 3 4 5
___ 134.	_____	1 2 3 4 5
___ 135.	_____	1 2 3 4 5
___ 136.	_____	1 2 3 4 5
___ 137.	_____	1 2 3 4 5
___ 138.	_____	1 2 3 4 5
___ 139.	_____	1 2 3 4 5
___ 140.	_____	1 2 3 4 5
___ 141.	_____	1 2 3 4 5
___ 142.	_____	1 2 3 4 5
___ 143.	_____	1 2 3 4 5
___ 144.	_____	1 2 3 4 5
___ 145.	_____	1 2 3 4 5
___ 146.	_____	1 2 3 4 5
___ 147.	_____	1 2 3 4 5
___ 148.	_____	1 2 3 4 5
___ 149.	_____	1 2 3 4 5
___ 150.	_____	1 2 3 4 5
___ 151.	_____	1 2 3 4 5
___ 152.	_____	1 2 3 4 5
___ 153.	_____	1 2 3 4 5
___ 154.	_____	1 2 3 4 5
___ 155.	_____	1 2 3 4 5
___ 156.	_____	1 2 3 4 5

A/N	Behaviors	Ratings
___ 157.	_____	1 2 3 4 5
___ 158.	_____	1 2 3 4 5
___ 159.	_____	1 2 3 4 5
___ 160.	_____	1 2 3 4 5
___ 161.	_____	1 2 3 4 5
___ 162.	_____	1 2 3 4 5
___ 163.	_____	1 2 3 4 5
___ 164.	_____	1 2 3 4 5
___ 165.	_____	1 2 3 4 5

APPENDIX 6C

SAMPLE OABA IMPORTANCE RATING SCALE COVER LETTER

(date)

(name of expert)
(address)
(address)

Dear *(name of expert)*,

Thank you for generating and submitting the list of affective behaviors which are needed to be successful as a *(name of occupation)*. Other experts participating in Occupational Affective Behavior Analysis (OABA) also submitted lists. Your help is now needed to rate the importance of each of the behaviors submitted.

Enclosed with this letter is the OABA Importance Rating Scale. Judge each of the behaviors in two ways. First, indicate whether you feel each of the behaviors is an affective behavior. Second, rate the importance of each affective behavior. The rating scale contains specific instructions.

Please return the completed OABA Importance Rating Scale with any comments you wish to provide by *(date)*. A self-addressed, stamped envelope has been provided.

Thank you for your effort; your help has been appreciated.

Sincerely,

(your name)
(your title)

Enclosure:

Performance-Based Occupational Affective Behavior Analysis (OABA)

Instrument

by

David J. Pucel

Qetler TJ Jensrud

Susan Damme

January 1992

Minnesota Research and Development Center for Vocational Education
Department of Vocational and Technical Education
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INTRODUCTION

More people lose their jobs because of inappropriate affective behaviors (e.g., attitudes) than due to a lack of knowledge or skill. Performance-Based Occupational Affective Behavior Analysis (OABA) is a procedure for identifying the affective behaviors which are critical to success in a particular occupation (e.g., machine shop). Identifying these behaviors is the first step in developing instructional materials to assist people with mastering these behaviors and increasing their potential for success. OABA is a modified version of the method for identifying affective behaviors which comes from the text Performance-Based Instructional Design (Pucel, 1989). The Performance-Based Instructional Design (PBID) system is a comprehensive curriculum development tool that educators and trainers can use to determine and teach the behaviors needed by a person to perform a given occupation. OABA focuses only on identifying the affective behaviors needed for successful performance.

Affective behaviors are visible actions which communicate emotional tones toward people, data, and things. They are sometimes interpreted as attitudes. They often relate to the manner in which something is done and not to the process of actually doing it. They usually take the form of body language, words chosen, or the ways words are presented. Some examples of affective behaviors are (a) cooperate with co-workers, (b) attend to details, (c) respect clients, and (d) comply with rules (Pucel, 1989).

OABA provides a step-by-step process to identify affective behaviors. The eventual product is a list of important role-related affective behaviors that should be considered for inclusion in an instructional/training program.

As you continue, **please read** the directions presented in this document and follow them carefully. If you do not, it is very easy to get lost. **Do not** assume your past knowledge of content analysis is sufficient to complete this process.

DEFINING AFFECTIVE BEHAVIORS

(as opposed to cognitive and psychomotor behaviors)

In order to perform successfully in an occupation, people need three types of job-related behaviors: (a) psychomotor, (b) cognitive, and (c) affective. Psychomotor behaviors involve the physical manipulation of tools, objects, etc. Cognitive behaviors involve the processing of information and making decisions. Affective behaviors involve visible actions which communicate emotional tones toward people, data, and things. Affective behaviors are communicated through body language, words chosen, and the way words are presented. Figure 1I presents examples of each of these three behavior types.

FIGURE 1I

Sample Behaviors

Psychomotor	Cognitive	Affective
File correspondence	Select a filing system	Comply with rules
Type a document	Assign salaries	Cooperate with workers

IDENTIFYING THE OCCUPATION TO BE ANALYZED

Before starting to identify specific affective behaviors, the occupation you will be analyzing must be identified. It is necessary to keep this occupation in mind because critical affective behaviors are specific to a given occupation. **Occupations** are any paid or non-paid occupation (e.g., cosmetology, secretary, auto mechanic, nurse, homemaker, etc.). The **occupation** that you are asked to generate affective behaviors for is:

_____
Occupation

Remember, it is necessary to keep this occupation in mind because critical behaviors are specific to a given occupation.

WRITING FUNCTIONS IN A PERFORMANCE FORMAT

Defining Functions

People in occupations perform major **functions**. **Functions** are defined in terms of (a) major duties, (b) problems to be solved, (c) products to be produced, (d) types of decisions to be made, (e) systems to be maintained, and/or (f) generic skills needed to perform a role. **Functions** are major groupings of behaviors that are usually performed together and which have a common name meaningful to people performing the occupation (e.g., interact with clients, diagnose electrical problems, maintain client files, sterilize instruments). They are the major activities that are assigned to people as they perform an occupation. **Functions** are smaller than an occupation, but larger than a behavior. They usually include more than one behavior. They are the basic clusters of behaviors needed to accomplish an occupation. Examples of **functions** for four different occupations are presented in Figure 2I.

Typically an occupation can be broken down into 5 to 15 **functions**. If you do not have at least 5, you are probably not being specific enough. On the other hand, if you have more than 15, you are probably being too specific and are not identifying the major subdivisions of the occupation.

FIGURE 2I

Sample Functions

Secretary	Auto Mechanic
Interact with clients	Diagnose electrical problems
Prepare payroll	Perform routine maintenance
Maintain filing system	Repair cooling system
Duplicate materials, etc.	Record work activities, etc.
Counselor	**Nurse**
Maintain client files	Sterilize instruments
Interact with clients	Interact with patients
Diagnose information needs	Administer medication
Provide information, etc.	Maintain patient files, etc.

However, this is a guideline; you may have fewer or more **functions** depending upon the occupation you are analyzing.

Function Format

Functions should be written in a performance format. The format for **functions** includes two components:

1. Action Verb	+	2. Object Acted Upon

The first component should be written as an action verb which would be used to direct a person to do something such as interact, prepare, maintain, duplicate, and record. The verbs should not end with "ing" or "s".

The second component is the object acted upon. You can determine the object by asking yourself "what" or "whom" after the verb you have selected. For example,

Selected Verb	Object
Interact with	"whom"
Prepare	"what"
Maintain	"what"

The answers would be objects acted upon, such as:

Selected Verb	Object
Interact with	clients
Prepare	payroll
Maintain	filing system

Recording Functions

In order to identify **functions** for the occupation you are to analyze, think of yourself as the supervisor of a person in the role. What major activities would you typically assign to the person? Refer to the **FUNCTION WORKSHEET** that follows (Figure 3I). At the top of the page write in the occupation identified on page I-4. Identify the major **functions** for that occupation.

Remember:

1. **Functions** can be duties, problems to be solved, products to be produced, types of decisions to be made, systems to be maintained, and/or generic skills needed to perform an occupation.
2. **Functions** are major groupings of behaviors.
3. **Functions** should contain a verb and an object acted upon.

WRITING AFFECTIVE BEHAVIORS IN A PERFORMANCE FORMAT

Each function is accomplished by performing a variety of psychomotor, cognitive, and **affective behaviors**. As you can see in Figure 4I, in order to perform the function "maintain a filing system" within the occupation of a secretary, people must be able to perform psychomotor, cognitive and **AFFECTIVE BEHAVIORS**. Each function requires different combinations of each.

Further Definition of Affective Behaviors

Affective behaviors are usually performed while performing a psychomotor or cognitive behavior. For example, while placing documents in a file, one must "comply with rules." While deciding which filing system to use, one must "attend to details." As you continue, you should concentrate on the **affective behaviors**, (i.e., the emotional tones toward people, data, and things needed to successfully perform each function). Although you should not focus your attention on how things and objects are

FIGURE 3I

Function Worksheet

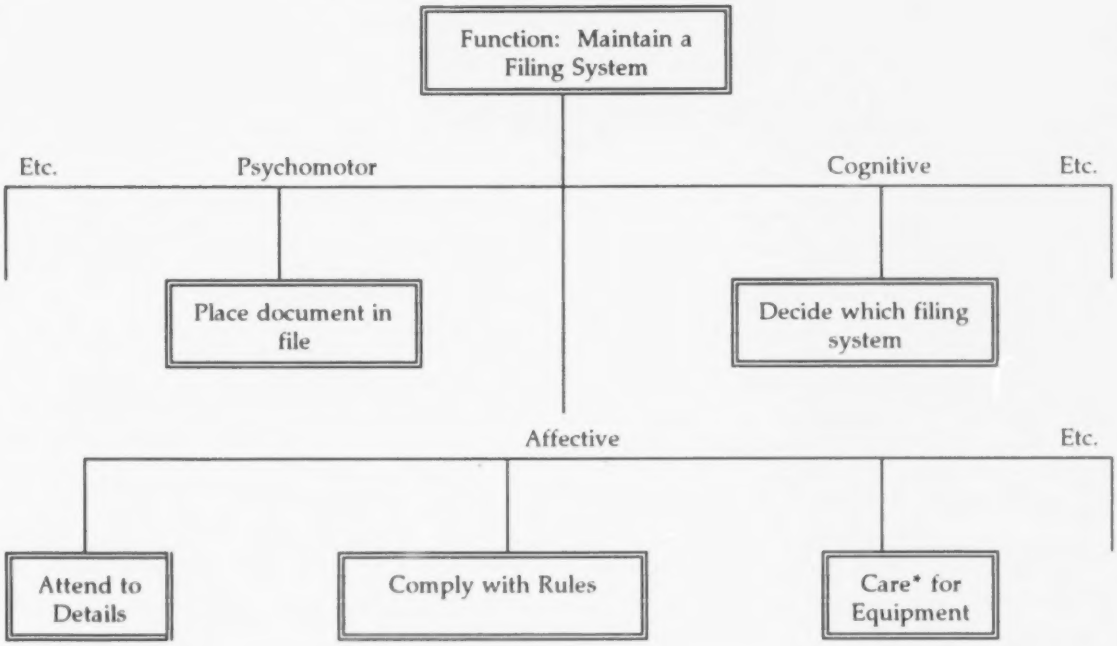
OCCUPATION: _____

MAJOR FUNCTIONS

ACTION VERB	OBJECT ACTED UPON
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

FIGURE 4I

Example Behaviors for a Specific Secretarial Function



*Care refers to the emotion of concern, as contrasted with maintaining something in a physical sense (e.g., to keep in repair).

manipulated (psychomotor behaviors) or how decisions are made (cognitive behaviors), you may need to think about them in order to identify the **affective behaviors**.

Occupation-related affective behaviors are the affective behaviors needed to effectively perform the functions identified in the previous section. They are not global attitudes. Attitudes are often described using general terms such as enthusiasm, patience, and neatness. These are not precise enough to focus and develop instruction to teach people to perform given roles.

In order to teach people **affective behaviors** which will increase their potential for success, the behaviors must be clearly defined and relevant to that occupation. They must be occupation-specific. For example, the **affective behavior** "cooperate with co-workers" might not be needed to prepare for an occupation in which people always work alone; however, it would be needed if they are expected to

work with others. To determine whether an **affective behavior** is occupation-related, ask yourself the following questions:

1. Would the absence of this **AFFECTIVE BEHAVIOR** prevent a person from entering a specific occupation?
2. Would the absence of this **AFFECTIVE BEHAVIOR** prevent a person from continuing in that occupation?

Affective Behavior Format

The format is very similar to that used to state functions. However, the format for a behavior can include three components:

1.		2.		3.
Action verb	+	Object Acted Upon	+	Modifying Information (e.g., adjectives)

The first two components are the same as those discussed in writing functions. The first component is a verb in the form of an action verb without any endings (e.g., "ing" or "s"). A list of sample affective verbs is presented in Appendix II, entitled "Sample Affective Verbs". Many of the verbs are listed, however, you may also use other verbs which communicate emotional tones.

The second component is the object acted upon. In order to identify the object, you should ask yourself the question to "what" or "whom," after selecting the verb. For example,

Selected Verb	Object
Respect	safety rules
Initiate	in-shop repairs
Care for	customers' feelings

The third optional component is modifying information. Modifying information is added to a behavior only when:

1. The behavior chosen could be performed within the occupation differently under different circumstances as defined by the modifying information.
2. The application of the behavior defined by the modifying information is so different that it would require different training from other applications of the same behavior.

Basically, the modifying information is used to differentiate the circumstances so that different instruction could be developed to teach the behavior in each of the circumstances.

For example, you want people to "respect customers' feelings." If the manner in which one would respect customers' feelings is the same in all circumstances within the occupation, there is no need for

modifying information. However, if the manner in which one would respect customers' feelings during complaints is sufficiently different from respecting customers' feelings during a sale, the modifying information would be added. This would be done to clearly define each of these behaviors as requiring separate instruction. Assuming they were sufficiently different, there would be two behaviors: (a) respect customers' feelings during complaints, and (b) respect customers' feelings during a sale. If they were not sufficiently different, there would be one behavior: "respect customers' feelings."

Figure 5I presents samples of **affective behaviors** written in the above format.

FIGURE 5I

Occupations with Sample Affective Behaviors

Occupation	Action Verb	Object Acted Upon	Modifying Information
Secretary	Attend	to details	
	Tolerate	differences	
	Care	for documents	
	Share	equipment	with co-workers
	Care	for equipment	
	Cooperate	with co-workers	
Auto Mechanic	Care	for tools	
	Care	for customers' vehicles	
	Respect	safety rules	
	Attend	to details	
	Share	equipment	with co-workers
	Cooperate	with co-workers	
	Initiate	in-shop repairs	
	Respect	customers' feelings	during complaints
	Respect	customers' feelings	during a sale
Counselor	Adapt	to client emotions	
	Maintain	client rapport	
	Attend	to details	of discussion
Nurse Assistant	Respect	patients	
	Adapt	to interruptions	
	Respect	safety rules	

Analyzing Affective Behaviors Needed to Perform Functions

Affective behaviors allow people to perform functions within an occupation. Therefore, they are analyzed in relation to functions associated with the occupation. Appendices 2I and 3I present sample OABAs with partial lists of affective behaviors for the roles of auto mechanic and secretary.

A behavior analysis is conducted function by function. This means that the first function is analyzed in terms of the occupation-related **affective behaviors** needed for its successful performance, then the second function is analyzed, and so forth until all functions have been analyzed.

In Appendix 3I, starting with the function "interact with clients," **affective behaviors** needed to interact with clients were identified and listed. An "X" was placed after each of the behaviors under that function. After listing all of the **affective behaviors** needed to interact with clients, the second function "prepare payroll" was analyzed. If a behavior that was identified when analyzing function one would also be needed to carry out function two, it should not be entered again. Each behavior should appear on the list only once. If a behavior is important to more than one function, an "X" is placed in the row for that behavior under each function to which it pertains. (e.g., attend to details is important to each function).

Recording Affective Behaviors

Remove the OABA Worksheet (Appendix 4I) and copy the occupation and functions from the Function Worksheet (Figure 3I) onto this worksheet. List the functions across the top of the worksheet. Complete the worksheet by entering **affective behaviors** you feel are important to performing each function along the left-hand side. Treat this activity as a "brainstorming" session. Write down any behaviors that come to mind. There are no right or wrong answers; this is a chance for you to express your opinion.

Remember:

1. Do not use general attitudes (e.g., enthusiasm).
2. Use **AFFECTIVE BEHAVIORS** specific to the occupation (e.g., machinist, auto mechanic, legal secretary).
3. Follow the format for writing behaviors.
4. Use modifying information only if necessary.
5. Do not write down the same behavior twice (use Xs).
6. Only identify **AFFECTIVE BEHAVIORS**.
7. Make sure each behavior applies to at least one function.

After you complete the OABA Worksheet, please mail it back in the self-addressed envelope. Keep this OABA Instrument for later reference.

APPENDIX 11

SAMPLE AFFECTIVE VERBS

accept	acknowledge	adapt	address
admit	agree	adopt	aid
allow	anticipate	appreciate	argue
assist	attend	avoid	collaborate
care*	change	comfort	communicate
comply	consider	consult	contribute
cooperate	demonstrate	disagree	discuss
display	encourage	establish	excuse
exhibit	facilitate	follow	forgive
foster	give	greet	heed
initiate	interact	invite	join
listen	meet	modify	motivate
observe	offer	participate	permit
persist	praise	preserve	promote
react	receive	reciprocate	relate
rely	reply	resist	resolve
respect	revise	seek	share
simplify	smile	support	talk
thank	tolerate	treat	uphold
vary	visit	volunteer	

*Care refers to treating something carefully as contrasted with maintaining something.

APPENDIX 2I

SAMPLE OABA WORKSHEET

OCCUPATION: Auto Mechanic

FUNCTIONS

AFFECTIVE BEHAVIORS VERB|OBJECT|MOD.INFO	Diagnose Electrical Problems	Perform Routine Maintenance	Repair the Cooling System	Record Work Activities	Communicate with Customers									
Care for Tools/ Equipment	X	X	X											
Care for Customers' Vehicles	X	X	X											
Respect Safety Rules	X	X	X											
Attend to Details	X	X	X	X	X									
Share Equipment with Co-workers	X	X	X											
Cooperate with Co-Workers	X	X	X	X	X									
Initiate In-shop Repairs		X	X											
Respect Customers' Feelings During Complaints					X									

APPENDIX 3I

SAMPLE OABA WORKSHEET

OCCUPATION: Secretary

FUNCTIONS

AFFECTIVE BEHAVIORS VERB|OBJECT|MOD.INFO	Interact with Clients	Prepare Payroll	Maintain a Filing System	Duplicate Materials	Answer Phones	Open/Sort Mail	Type Documents	Record Budget Items						
Attend to Details	X	X	X	X	X	X	X	X						
Tolerate Differences	X				X									
Treat Clients with Respect	X				X									
Care for Documents		X	X	X		X	X	X						
Care for Equipment			X	X	X		X	X						
Share Equipment with Co-Workers				X	X		X	X						
Cooperate with Co-workers				X		X	X							

APPENDIX 4I

OABA WORKSHEET

OCCUPATION:_____ FUNCTIONS

AFFECTIVE BEHAVIORS VERB|OBJECT|MOD.INFO														

SECTION 2
SUPPORTING RESEARCH*

INTRODUCTION

It has been said that more people lose their jobs due to inappropriate affective behaviors than due to lack of ability to perform job skills. Affective behaviors are described as emotional tones toward something. They are often expressed as feelings, attitudes, and habits. They are recognized through body language (e.g., smile vs. frown), the selection of words (e.g., you look good vs. you look dumb), the way words are communicated (e.g., conversational voice vs. loud, accusing voice), and other observable traits (Pucel, 1989).

Historically, vocational educators and trainers in business and industry have focused on psychomotor skills and the knowledge base associated with those skills. However, the literature suggests that affective behaviors are also critical to job success. Even though their need is recognized, their inclusion in curriculum development has been met with opposition. The resistance to teach affective behaviors arises for a variety of reasons. Essex & Liu (1974) reported that some teachers believe the teaching of affective behaviors is an invasion of students' right to privacy and, therefore, schools should not attempt to teach affective behaviors. Other teachers resist teaching affective behaviors because they consider them the most difficult types of behaviors to teach (Atwood, 1973).

As we have moved into the information age and larger numbers of people move into service occupations, it has become increasingly apparent that curriculum development procedures must be revised to include affective skills in occupational preparation. Given this recognition, a number of people have attempted to develop procedures to identify and teach affective behaviors. However, the approaches differ widely. Some people view affective behaviors as subordinate to psychomotor behaviors and not as a separate domain for curriculum development (Norton, 1985). Others have developed procedures to identify generic affective behaviors without associating them directly with specific job roles (Kazanas, 1978; O'Neil & Nelson, 1978; Luft & Suzuki, 1980).

Pucel (1987, 1989) argued that these approaches are not adequate. First, relegating affective behaviors to the role of only being supportive of tasks does not give them adequate emphasis in the process of curriculum development. It is argued that affective behaviors require the same curriculum development and evaluation emphasis as psychomotor tasks if students are to exhibit them on the job. Second, just as psychomotor behaviors (tasks) vary from one job to another, the specific affective

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*A thorough review of the literature, the development of the Occupational Affective Behavior Analysis (OABA) materials, and the cosmetology pilot results are presented in the MRDC publication The Identification and Stability of Occupationally Specific Affective Behaviors, (D. Pucel, Q. Jensrud, & S. Damme, 1990). The detailed results of the machinist pilot are contained in an unpublished MRDC paper Analyzing Occupationally Specific Affective Behaviors for Curriculum Development, (D. Pucel, D. Warner, & Q. Jensrud, 1990).

behaviors essential to different jobs also vary. Research supports the contention that different affective behaviors are important for different jobs (Beach, Kazanas, & Smith, 1982; O'Neil & Nelson, 1978).

Research also indicates that certain groups of people appear to be better able to determine which behaviors are most important. The literature suggests that supervisors and/or employers and instructors appear better able to analyze an occupation than students or workers (Beach, Kazanas, Sapko, Jr., Sisson, & List, 1978; Petty, Kazanas, & Eastman, 1981; Miller & Usoro, 1981).

The research presented below describes 3 years of research leading to the development of the OABA. OABA has two parts:

1. **OABA Coordinator Manual** which contains directions to be followed by the person in charge of coordinating the analysis (pp. 5-31).

2. **OABA Instrument** which is sent to occupational experts to obtain brainstormed lists of affective behaviors important to success (pp. 33-53).

OABA is an efficient tool for identifying lists of critical affective behaviors judged to be important to success in an occupation. Two pilot tests of the procedures indicated that the OABA Coordinator Manual and the OABA Instrument are effective and efficient in the collection of data to develop validated lists of affective behaviors for a specific occupation. The behaviors are stated in a behavioral format similar to tasks. This allows for focused curriculum development aimed at teaching those behaviors.

STATEMENT OF THE PROBLEM

A major roadblock to the teaching of affective behaviors was determined to be the absence of an efficient technique for identifying affective behaviors which are important to success in a given job. A technique was needed for identifying and validating affective behaviors similar to that used with identifying job tasks. If such a technique was available, legal and moral issues about teaching affective behaviors could be largely eliminated. Just as validated job tasks have become acceptable as content for occupational programs, validated job-related affective behaviors could also become acceptable and defensible content.

Most of the studies identified in the literature that have attempted to identify affective behaviors important to job success required complex research methodologies which were beyond the scope of typical curriculum developers or instructors. These studies often took a long time, required meetings of groups which were very expensive, or they produced results without job validation. OABA was developed to make a relatively inexpensive and effective tool available for the identification of affective behaviors.

The specific goals of the research were to:

1. Develop a technique which would allow instructors and/or employers to efficiently identify and record affective behaviors relative to a specific job in a behavioral format.
2. Develop a technique to synthesize the lists of affective behaviors generated by individual experts within a group into a composite list which represents group agreement.
3. Determine the extent to which the procedures produced stable lists between different groups of instructors and/or employers for the same job.

METHODOLOGY AND RESULTS - GOALS 1 AND 2

Two pilot studies were conducted in the fields of cosmetology and machine shop to develop and validate OABA. Validity of OABA results was established through expert group opinion that the behaviors identified were important to success on-the-job. The studies used instructors who had worked in the occupations and taught the occupational programs and employers of people in the occupations. Intergroup reliability was investigated by examining the extent to which different groups analyzing the same occupation produced similar lists of affective behaviors. The entire process was accomplished through the mail and takes approximately 5 hours of time for each expert, 5 hours for the coordinator, and 2 hours of clerical support. The procedure can be completed in 6 to 8 weeks.

The methodologies and results will be presented in relation to the goals of the project. First, the methodologies and results concerning the first two goals will be presented.

Instrumentation

Design parameters were established for the development of OABA. OABA needed to identify affective behaviors important to success in a specific job in an efficient manner and to be implementable by instructors or curriculum developers. The procedure also needed to yield a list of validated job-related affective behaviors.

Two sets of materials were developed: (a) a manual to be used by the coordinator conducting the study (OABA Coordinator Manual), and (b) an instrument to be used by occupational experts who would provide information to the coordinator on specific job-related affective behaviors (OABA Instrument). Two advisory committees were used during the development of the materials. One committee, composed of curriculum developers and teachers educators, reviewed OABA for clarity and curriculum accuracy. The second committee, composed of staff development personnel from Minnesota's technical colleges and instructors from a variety of occupational programs, reviewed the OABA Coordinator Manual to determine if the entire process could be implemented by the typical instructor.

The methodology in OABA was developed based on the review of the literature and procedures presented in the text Performance-Based Instructional Design (Pucel, 1989). Performance-based

instructional design (PBID) is founded on the belief that the identification of affective behaviors must receive the same level of attention as that given to the identification of psychomotor and cognitive behaviors, and that each behavior must be identified in terms of job functions (duties) in order to ensure their occupational relevance for a particular occupation.

The OABA Coordinator Manual contains six steps:

1. Identifying the occupation to be analyzed
2. Identifying a group of experts and inviting their cooperation
3. Administering OABA to obtain a brainstormed list from each expert
4. Developing a group composite list of affective behaviors
5. Obtaining importance ratings for each behavior from individual experts
6. Generating a list of important critical affective behaviors for the occupation

A detailed discussion of each of these steps is presented in the OABA Coordinator Manual (pp. C1-C25). Each step was designed to be implemented through the mail by the project coordinator and individual experts. Each instrument includes a set of instructions that would allow an individual to use it without the assistance of others. Each of these steps will be discussed in relation to the cosmetology pilot and the machinist pilot. The cosmetology pilot was completed before the machinist pilot began in order to capitalize upon experience with the cosmetology pilot before the second pilot. The discussion will focus on implementation and results.

Pilot Study Implementation and Results

1. Identifying the occupation to be analyzed

Cosmetology Pilot: The occupation of cosmetologist was selected because (a) cosmetologists have a relatively high level of client interaction requiring affective skills, (b) the functions of a cosmetologist have relatively little variation among different job settings, (c) cosmetology training programs are governed by state licensure requirements which ensure uniformity, and (d) cosmetology programs were offered in the majority of technical colleges throughout the state of Minnesota which provided a sufficient number of subjects.

Machinist Pilot: The occupation of machinist was selected because (a) machinists have a high level of interaction with things rather than clients, in contrast to the role of cosmetologist, (b) interaction with people is limited mainly to interaction with co-workers, (c) the role of a general machinist is relatively similar across different job settings, and (d) machinist programs were offered in a large number of technical colleges throughout the state of Minnesota which provided a sufficient number of subjects.

2. Identifying a group of experts and inviting their cooperation

Cosmetology Pilot: Two groups of instructors and one group of employers were sampled as a basis for comparisons among different groups from the same occupation. The three groups were matched in terms of geographic location and technical college affiliation to equate them on rural vs. urban perspectives and curriculum development practices used in the schools. Two matched samples of 10 instructors each were randomly drawn. The employer group was formed by randomly selecting 10 members of the instructors' advisory committees nominated by the twenty instructors. Care was taken to ensure that the distribution of employers represented the same colleges as the instructors. The original samples of 10 subjects in each instructor group decreased to 8 and 7 in the two instructor groups and to 8 in the employer group. Some materials arrived past the deadline or were not returned, and 1 subject was hospitalized and unable to complete the project.

Machinist Pilot: The same sampling criteria were used as were used in the cosmetology pilot except employers were not sampled. Ten people were originally sampled in each group with randomly assigned alternates as possible replacements for people who could not participate. The samples eventually decreased in size, after utilizing alternates, to 9 and 8. Some materials were not returned, and 1 subject was hospitalized and unable to complete the project.

After the groups were identified, letters were sent to the instructors or employers sampled which briefly described the study and requested their participation. The importance of their help in identifying affective behaviors important to success in their occupation was stressed. A payment of $120 was offered for cooperation in the research.

3. Administering OABA to obtain a brainstormed list from each expert

The coordinator sent the OABA Instrument to each of the identified experts. Completion of OABA was designed to yield a brainstormed list of affective behaviors from each expert. OABA contains the following steps (a) define affective behaviors, (b) identify the occupation to be analyzed, (c) write functions in a performance format, and (d) write affective behaviors in a performance format.

A complete description of each of these steps is contained in the OABA Instrument (pp. 33-53).

Cosmetology Pilot: The letter and OABA Instrument were sent to the experts and they were given two weeks to respond. Phone calls were made to those who did not respond to encourage responses and to answer questions. Information from those conversations was used to clarify the OABA Coordinator Manual which was used with the machinist pilot. Individuals were able to successfully generate individual lists of affective behaviors in the verb/object/modifying information format using the OABA. Appendix 1 contains a sample OABA Worksheet of

functions and associated affective behaviors developed by one individual. At times, a few psychomotor behaviors were also entered onto the list; however, they did not exceed 10% of a given individual's list. Individual lists varied in length from 5 to 29 behaviors. The ranges between individual lists in instructor group A, instructor group B, and employer group E were 6-23, 10-29, and 5-12 respectively. Groups A, B, and E collectively submitted 126, 138, and 73 behaviors. There was only 1 subject of the 23 who did not seem to grasp the nature of the behavioral format.

Machinist Pilot: A graduate student not involved with the development of OABA, and who was not familiar with the role of a machinist followed the procedures in the OABA Coordinator Manual. Results indicated that OABA was successful in enabling individuals to generate lists of affective behaviors necessary to perform as a machinist. Individuals were able to successfully generate individual lists of affective behaviors in the verb/object/modifying information format using the OABA Instrument. Lists generated by individuals varied in length from 8 to 25 behaviors. The ranges between individual lists in instructor group A and instructor group B were 8-20 and 9-25 respectively. Groups A and B collectively submitted 113 and 123 behaviors. The number of psychomotor behaviors entered on the list in the machinist study was much greater than in the cosmetology pilot. Eighty-two (73%) of the behaviors from group A and 69 (56%) of the behaviors were later rated as not affective behaviors based on total group opinion.

The procedure presented below for producing the synthesized list for a group was capable of detecting and eliminating the non-affective behaviors from the final list of important affective behaviors.

4. Developing a group composite list of affective behaviors

Cosmetology and Machinist Pilots: In both pilot studies one person from each of the study groups was identified as the expert who would generate the composite list of brainstormed affective behaviors. Each list was to include all behaviors proposed by the experts in the group. Each expert selected was sent a packet containing copies of OABA Worksheets of all members of the group, instructions for the development of the combined list, and a blank OABA Importance Rating Scale for recording the composite list. The directions asked the expert generating the composite list to include all behaviors listed and to remove only behaviors that were exactly the same as one already on the list for that group.

Based on the pilot studies, this procedure was changed. Because all of the behaviors that are listed by individuals are to be included in the list unless they are exactly the same, the need for expertise in the occupational area was not required. Therefore, regardless of whether the coordinator has expertise in the occupation or not, the coordinator can complete this step.

(See Appendix 2 for a sample of an OABA Importance Rating Scale with the composite list of behaviors entered.)

5. **Obtaining behavior importance ratings from experts**

Group consensus among occupational experts is one of the most often used and accepted procedures for establishing the validity of behavior lists. OABA was developed to efficiently derive a list of affective behaviors which a group of occupational experts agreed were important to success on the job.

Experts were sent a cover letter and the OABA Importance Rating Scale containing the composite list of behaviors for their group. Each expert was asked to judge whether each behavior was an affective behavior vs. a psychomotor or cognitive behavior (A = affective behavior, N = not an affective behavior). If a behavior was judged as affective, the importance of the behavior in terms of success on-the-job was rated on a 5-point Likert scale using the descriptors contained in Appendix 2. The participants were asked to complete and return the rating scales within one week.

6. **Generating a list of important critical affective behaviors for the occupation**

When the OABA Importance Rating Scales were returned, the coordinator analyzed the data to develop a list of affective behaviors ranked according to their importance to success in the occupation. Average (mean) group ratings were calculated using the ratings obtained from the individuals' importance rating scales. If a behavior was judged not to be an affective behavior, it was assigned a rating of zero. If it was judged to be an affective behavior, it was assigned the rating given by the individual expert. The average rating for a behavior represented group consensus as to its importance to success on the job. Only those behaviors with mean ratings at or above 3.5 on the 5-point scale were considered to be critical affective behaviors. A mean rating of at least 3.5 means the behavior was judged as at least "often important" to success on the job.

Cosmetology Pilot: The number of behaviors on the list with mean ratings at or above 3.5 were (a) 69 for Group A, (b) 35 for Group B, and (c) 21 for Group E. All of the behaviors judged to be non-affective received average ratings below 3.5 and were eliminated from the final list along with affective behaviors not judged to be important. The lists are presented in Appendix 3A.

Machinist Pilot: The number of behaviors on the list with mean ratings at or above 3.5 were (a) 31 for Group A, and (b) 54 for group B. All of the behaviors judged to be non-affective received average ratings below 3.5 and were eliminated from the final list along with affective behaviors not judged to be important. The machinist groups were as successful as the cosmetologists at generating an agreed upon list of important affective behaviors. The lists are presented in Appendix 3B.

Conclusions Regarding the Effectiveness of OABA to Yield Validated Lists of Important Affective Behaviors

The results of the two pilot studies clearly showed:

1. OABA is capable of yielding validated lists of affective behaviors important to success in a given job.
2. A coordinator, other than one of the procedure developers, can implement OABA.
3. Individual experts (instructors or employers) are able to utilize OABA to independently develop lists of affective behaviors. (Forty individuals, 23 experts from the cosmetology study and 17 experts from the machinist study, were able to apply the procedure. Only one person in the cosmetology study did not produce the list in the desired format.)
4. Experts assigned to develop a composite list of behaviors from the individual brainstormed lists of behaviors developed by members of their groups (three in the cosmetology study and two in the machinist study) were able to develop composite lists.
5. The methodology of having individual experts within a group rate the importance of affective behaviors identified by group members does produce a validated rank ordered list of affective behaviors in order of importance to success on the job. It also eliminates non-affective behaviors and other behaviors proposed which are not validated as important by the group.

METHODOLOGY AND RESULTS - GOAL 3

Goal 3 was to determine the extent to which the procedures produced similar lists between different groups of instructors and/or employers for the same occupation. Lists generated by three groups (two groups of instructors and a group of employers) were compared within the cosmetology pilot (see Appendix 3A). Lists from two groups of instructors were compared in the machinist study (see Appendices 3B).

It was recognized that a test of similarity of behavior lists between groups for the same occupation is not a typical criterion applied to job analysis procedures in vocational education and training. Other techniques for conducting job analyses in the literature made the assumption that if a group of experts agreed on a common list, that list was sufficient.

A scanning of the lists developed by the different groups within each of the pilots indicated that the groups did not list the same behaviors in the same way. Therefore, it did not make sense to try to compare lists generated within the same pilot for exactly the same behaviors worded in exactly the same way.

The lists were compared in two ways. First, a team of three people reviewed the lists generated within each pilot to determine if the groups within a pilot were listing essentially the same behavior but doing it in different words. A list of discrete behaviors was developed which took into account the fact that the same behavior could be stated in more than one way. A discrete behavior was a behavior that was listed by one or more groups regardless of the exact wording. The second method of comparing lists developed by the different groups within a given pilot was to compare the verbs the

groups used to write their behaviors and the objects toward which the actions in the behaviors were directed.

Using a data base computer program (Dbase III+), all behaviors for each of the three groups within each pilot were entered using the format verb/object/modifying information. The behaviors in each group were then sorted, based on object and verb. This was done to facilitate the examination of similarities between the types of objects and verbs suggested by the groups. The sorting also facilitated looking at the discrete behaviors across groups.

The format used to instruct subjects on how to state the affective behaviors was found to magnify differences between groups and did not allow for efficient collapsing of behaviors to the same level of detail. The object of the behaviors had been allowed to include both the object and a modifying adjective. This required behaviors to be classified as different, based on the adjectives modifying the object as well as the object. For example, consider the following five behaviors:

1. Respect rules
2. Respect safety rules
3. Respect sanitation rules
4. Respect laws
5. Respect state laws

Each has the same verb and there are only two objects (rules and laws). However, as they are written, they represent five different behaviors. To facilitate data analysis, the behaviors were reformatted to place the modifying adjectives into the modifying information. For example, during analysis, "respect sanitation rules" was converted to "respect rules of sanitation." When the modifying adjectives were placed with the modifying information, the five behaviors above could be collapsed into two higher level (more comprehensive) behaviors: "respect rules" and "respect laws." The detailed modifying information then answered questions like: What type? Where? For whom? When?, etc. This reformatting facilitated analysis of similarities while still allowing all separate behaviors to be fully differentiated (e.g., the five separate behaviors above). When the behaviors were reformatted for analysis, they were analyzed to determine the extent to which the objects of the affect and the verbs which suggest the types of affect, were similar between the groups.

Analyses of the Discrete Behaviors

Cosmetology Pilot: The 125 important affective behaviors on the lists developed by two instructor groups and the employer group were condensed into 39 discrete behaviors. They are presented in Appendix 4A. Six of the discrete behaviors were addressed by all three groups. Thirteen additional behaviors were addressed by two of the three groups. Therefore, 19 (49%) of the discrete behaviors were addressed by two or more groups. The remaining 20 (51%) behaviors

were stated by only one group. An examination of the relative contributions of discrete behaviors by each of the three groups revealed that the employers added only three discrete behaviors that were not already suggested by the instructor groups. This raises a question about the necessity of going through the substantial effort of obtaining employer group input if the instructor groups actually have occupational experience. The face validity of the process may be increased by including employer groups, but the additional information gained may be limited.

Machinist Pilot: The 85 important affective behaviors on the lists developed by the two groups of instructors were condensed into 41 discrete behaviors. They are presented in Appendix 4B. Fifteen (36%) of the discrete behaviors were addressed by both groups; twenty-six (64%) were addressed by only one of the groups.

Analyses of Common Verbs and Objects

Cosmetology Pilot: The three groups developed behaviors which directed affect toward 60 objects. The types of affect were represented by 44 verbs. The verbs and objects addressed by each of the groups is presented in Appendix 5A. Of the 44 verbs used to describe the types of affect needed by cosmetologists, 10 were used by all three groups. Those 10 verbs were used with 61 (49%) of the 125 behaviors identified by the groups. Another 12 verbs were used by at least two groups with 37 (29%) of the behaviors. Therefore, the 22 verbs that were used by at least two groups accounted for 98 (78%) of the behaviors listed by the three groups.Of the 60 objects listed toward which cosmetologists direct their affect, 7 were used by all three groups. Those 7 objects were used with 49 (39%) of the 125 behaviors. Another 12 objects were used by at least two groups with 27 (22%) of the behaviors. Therefore, the 19 objects that were used by at least two groups accounted for 76 (61%) of the behaviors.

Machinist Pilot: The two groups developed behaviors which directed affect toward 53 objects. The types of affect were represented by 34 verbs. Of the 34 verbs used to describe the types of affect needed by machinists, 14 were used by both groups. Those 14 verbs were used with 60 (71%) of the 85 behaviors identified by the groups. Of the 53 objects listed toward which machinists direct their affect, 12 were used by both groups. Those 12 objects were used with 39 (46%) of the 85 behaviors (see Appendix 5B).

Conclusions Regarding the Extent to Which OABA Yields Lists of Important Affective Behaviors Which are Stable Across Different Expert Groups

The results of the two pilot studies showed that different groups of experts analyzing the same occupation do not produce the same lists of affective behaviors considered to be important to success in a given job. Even when the specific wording of the behaviors is taken into account by abstracting common meaning from behaviors into discrete behaviors, the lack of consistency between groups is

substantial. The cosmetology groups tended to agree on the types of affect needed in their occupation as expressed by the verbs they used and on the objects of the affect. The machinist groups tended to agree on the types of affect needed in their occupation as expressed by the verbs they used; however, they did not direct that affect at similar objects.

The criterion of evaluating OABA results by examining the similarity of the lists developed by different groups of experts represents a stringent criterion. Nowhere in the literature could the application of a comparable criterion be found for the output of other job analysis processes. The general assumption has been that if a group of occupational experts agrees that behaviors are important to success in an occupation, that is sufficient justification for teaching those behaviors. This has been a long standing premise of task analysis, DACUM (Norton, 1985), and other procedures used with job analysis. OABA has been shown to meet that criterion. However, the results of the two pilot studies regarding OABA raises a question about the stability of the various approaches used with all types of job analysis since there is no evidence that any of them produce stable results across different groups of experts.

OVERALL CONCLUSIONS

OABA is an efficient tool for identifying lists of critical affective behaviors judged to be important to success in an occupation. The two pilot tests of the procedures indicate that both the OABA Coordinator Manual and the OABA Instrument are effective and efficient tools for generating validated lists of affective behaviors regarding a specific occupation. The entire process can be accomplished through the mail and takes approximately 5 hours of time for each expert, 5 hours for the coordinator, and 2 hours of clerical support. The procedure can be completed in 6 to 8 weeks. The resulting behaviors are stated in a behavioral format similar to tasks. This allows for focused curriculum development aimed at teaching those behaviors.

BIBLIOGRAPHY

Atwood, J. (1973). Learning comes out in the open. American Vocational Journal, 48(4), 55.

Banks, J. (1973). Measuring the immeasurables. American Vocational Journal, 48(4), 36-37.

Beach. D. P. (1981, March). Development of an instructional model for helping youth acquire necessary work habits, attitudes, or values. Paper presented at the Eastern Educational Research Association Annual Conference, Philadelphia, PA. (ERIC Document Reproduction Service No. ED 199 569)

Beach, D. P., Kazanas, H. C., Sapko, J., Jr., Sisson, K. A., & List, R. (1978). Necessary work values, habits, and attitudes: A final report. (ERIC Document Reproduction Service No. ED 167 728)

Beach, D. P., Kazanas, H. C., & Smith, T. R. (1982). Development and possible uses of an inventory of affective worker competencies. Journal of Industrial Teacher Education, 20(1), 27-40.

Bernatovicz, F., & Clasby, M. (1984). Competency across the campus: The university secretary. Gorham, ME: University of Southern Maine, Division of Employee Relations. (ERIC Document Reproduction Service No. ED 252 162)

Bloom, B. S. (1956). Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York: David McKay Co.

Brauchle, P. E., & Petty, G. C. (1983, December). Identifying student perceptions of non-technical workskills. Paper presented at the American Vocational Association Convention, Anaheim, CA. (ERIC Document Reproduction Service No. ED 239 038)

Butler, R. C. (1972). Instructional systems development for vocational and technical training. Englewood Cliffs, NJ: Educational Technology Publication.

Campbell, L. P. (1974). Cognitive and affective: A dual emphasis. Contemporary Education, 46(1), 13-14.

Crawford, L. (1973). The identification of training requirements. Business Education Forum, 27(7), 22-23.

Crosby, R. (1984, December). Teaching students how to get along on the job. Paper presented at the American Vocational Association Convention, New Orleans, LA. (ERIC Document Reproduction Service No. ED 252 728)

Essex, D., & Liu, C. (1974). A methodology to access the content and structure of affective and descriptive meanings associated with the work environment. (Research and development series No. 98, Ohio State University, Columbus.) Washington, DC: National Institute of Education (DHEW). (ERIC Document Reproduction Service No. ED 106 657)

Gagne', R. M. (1965, 1970, 1977). The Conditions of Learning. New York: Holt, Rinehart, & Winston.

Kazanas, H. C. (1978). Affective work competencies for vocational education. (Information series No. 138.) Washington, DC: National Institute of Education (DHEW). (ERIC Document Reproduction Service No. ED 166 420)

Kazanas, H. C., & Wolff, L. C. (1972). Development of work habits in vocational education--what the literature indicates. Journal of Industrial Teacher Education, 10, 48-58.

Leach, J. (1978). Methods and materials for teaching occupational survival skills. Phase III: Influences of the occupational survival skills modules on the attainment of skills and attitudes toward employment of selected high school students. Urbana, IL: Illinois University-Urbana, Division of Adult Vocational and Technical Education. Springfield, IL: Illinois State Office of Education, Division of Business Education. (ERIC Document Reproduction Service No. ED 166 442)

Luft, R. L., & Suzuki, W. N. (1980). Nontechnical employment competencies for secondary cooperative work experience students. Journal of Vocational Education Research, 5(1), 71-80.

Miller, W. R., & Rose, H. C. (1975). Instructors and their jobs. Chicago: American Technical Society.

Miller, W., & Usoro, H. (1981). Affective work competencies as perceived by secondary vocational-industrial and post-secondary industrial-technical students. Journal of Industrial Teacher Education, 18(3), 35-42.

Murphy, P. (1972). Teaching for employability. Bismarck, ND: North Dakota State Board of Vocational Education, North Dakota State University College of Home Economics. (ERIC Document Reproduction Service No. ED 075 621)

National Center for Research in Vocational Education. (1977). Develop student performance objectives, Module B-2. (Professional teacher education module series, Ohio State University, Columbus.) Washington, DC: National Institute of Education (DHEW). (ERIC Document Reproduction Service No. ED 167 728)

Norton, R. E. (1985). DACUM handbook. Columbus, OH: Ohio State University, The National Center for Research in Vocational Education.

O'Neil, S. L., & Nelson, R. E. (1978). Workers view occupational survival as a combination of "skills." Delta Pi Epsilon Journal, 20, 13-19.

Petty, G., Kazanas, H., & Eastman, R. (1981). Affective work competencies of workers, supervisors and vocational educators. Journal of Vocational Education Research, 6(2), 55-71.

Prosser, C. A., & Quigley, T. H. (1950). Vocational Education in a Democracy. Chicago: American Technical Society.

Pucel, D. J. (1987, May). Incorporating affective skills into performance-based vocational education and industrial training. Paper presented at Mid-America Conference for Vocational-Technical Education, St. Paul, MN.

Pucel, D. J. (1989). Performance-based instructional design. New York: McGraw-Hill.

Pucel, D. J., Jensrud, Q., & Damme, S. (1990). The Identification and Stability of Occupationally Specific Affective Behaviors. St. Paul: University of Minnesota, Minnesota Research and Development Center for Vocational Education.

Pucel, D. J., Warner, D., & Jensrud, Q. (1990). Analyzing Occupationally Specific Affective Behaviors for Curriculum Development. St. Paul: University of Minnesota, Minnesota Research and Development Center for Vocational Education.

Pucel, D. J., Jensrud, Q., Damme, S., & Warner, D. (1991). Performance-Based Occupational Affective Behavior Analysis (OABA). St. Paul: University of Minnesota, Minnesota Research and Development Center for Vocational Education.

Roberts, T. B. (1972). Seven major foci of affective experiences: A typology for educational design, planning, analysis and research. Dekalb, IL: Northern Illinois University. (ERIC Document Reproduction Service No. ED 063 215)

Santopolo, F., & Kell, K. (1973, August). Critical job requirements for extension nonprofessionals. Paper presented to the Annual Meeting for the Rural Sociological Society, College Park, MD. (ERIC Document Reproduction Service No. ED 096 532)

Schmidt, B. J. (1970). Office observation shows need for attitude training. Business Education Forum, 24(5), 9-10.

U.S. Department of Labor. (1991). Dictionary of occupational titles (4th Ed.). Washington, DC: U.S. Government Printing Office.

Walls, R., Zane, T., & Werner, T. (1979). The vocational behavior checklist. Morgantown, WV: West Virginia University, Regional Rehabilitation Research and Training Center. Washington DC: Rehabilitation Services Administration (DHEW). (ERIC Document Reproduction Service No. ED 193 849)

Werner, C. (1984). Pre-employment and work maturity competencies for JTPA youth. Los Angeles: Unified School District. (ERIC Document Reproduction Service No. ED 250 555)

APPENDIX 1

SAMPLE OABA WORKSHEET

OCCUPATION: Cosmetologist

FUNCTIONS

AFFECTIVE BEHAVIORS VERB|OBJECT|MOD.INFO	Operate Appointment Desk	Identify Client Needs	Sanitize Implements/Equipment	Communicate with Clients and Employers	Perform Retail Sales	Maintain Client Records								
Treat Clients with Respect	X	X		X	X									
Respect Clients' Feelings During Complaints	X	X												
Care for Documents	X					X								
Respect Safety Rules			X											
Follow Manufacturer Instructions			X											
Care for Tools			X											
Maintain Client Rapport	X	X		X	X									
Attend to Details	X	X	X	X	X	X								
Accept Client/Co-worker/ Employer Suggestions	X	X		X	X									
Display Ethical Behavior in Salon	X	X		X	X									

APPENDIX 2

SAMPLE OABA IMPORTANCE RATING SCALE

Name: _____ Date: _____

INSTRUCTIONS:

1. Before rating this list of behaviors, please refer to your OABA Instrument previously sent to you to refresh your memory about the differences between psychomotor, cognitive, and affective behaviors. With these definitions in mind, read each behavior and first label it in the left "A/N" column as either...

   N = Not an affective behavior

   or

   A = an Affective behavior.

2. Disregard those behaviors labeled "N."

3. Rate the importance of each of the affective behaviors (those labeled "A") using the following scale:

   1 never important to success in the role
   2 seldom important to success in the role
   3 occasionally important to success in the role
   4 often important to success in the role
   5 always important to success in the role

A/N	Behaviors	Ratings				
___	1. Care for tools	1	2	3	4	5
___	2. Respect safety rules	1	2	3	4	5
___	3. Maintain client support	1	2	3	4	5
___	4. Etc.	1	2	3	4	5
___	5. _____	1	2	3	4	5

APPENDIX 3A

LIST OF COSMETOLOGY BEHAVIORS ORDERED BY MEAN RATINGS

Instructor Group A

List of Behaviors Ordered by Mean Ratings (N = 88)

Important Affective Behaviors (N = 69)	Mean
Cooperate with co-workers	5.000
Cooperate with clients	5.000
Demonstrate professionalism	5.000
Observe state laws	5.000
Respect client's feelings during complaints	5.000
Consult with clients	4.857
Cooperate with supervisors	4.857
Listen to clients	4.857
Perform safety rules	4.857
Respect clients	4.857
Respect co-workers	4.857
Adapt to schedules	4.750
Care of appointments	4.750
Follow manufacturer's instructions	4.750
Greet clients	4.750
Comply with rules	4.750
Comply with sanitation	4.750
Tolerate different personalities	4.750
Promote sanitation	4.667
Resolve complaints	4.625
Accept responsibility	4.625
Respect clients' opinions	4.625
Anticipate clients' needs	4.571
Attend phone	4.571
Respect safety rules	4.571
Maintain client rapport	4.571
Respect sanitation rules	4.571
Resolve clients' complaints	4.500
Attend to details	4.429
Consult with co-workers	4.429
Consult with supervisors	4.429
Accept duties	4.429
Listen to co-workers	4.375
Attend to details with clients	4.375
Care for equipment	4.375
Promote your salon	4.375
Promote services	4.375
Consider feelings of others	4.375
Assist with duties	4.333
Care for clients during service	4.286
Encourage personal hygiene	4.286
Exhibit promptness	4.250
Perform client services	4.250

Appendix 3A (continued)

Important Affective Behaviors (N = 69)	Mean
Care for others	4.143
Attend educational shows	4.143
Tolerate differences	4.125
Comfort clients	4.000
Offer hairstyle change	4.000
Promote sales for future	4.000
Share salon responsibilities with co-workers	4.000
Care of records	4.000
Motivate self during work day	4.000
Motivate others during work day	4.000
Uphold ethical behavior in salon	4.000
Accept suggestions	4.000
Support salon manager with salon	3.857
Interact with co-workers	3.857
Motivate staff	3.857
Attend to details with salon records	3.857
Initiate interest in salon	3.857
Display license	3.750
Avoid gossip	3.714
Document records	3.714
Assist co-workers while working	3.625
Encourage hairstyle change	3.500
Educate employees	3.500
Encourage change	3.500
Establish procedures	3.500
Care for documents	3.500

Other Behaviors (N = 19)	Mean
Share supplies with co-workers	3.375
Share equipment with co-workers	3.375
Relate costs	3.286
Offer new technical skills to clients	3.143
Facilitate the retail store	3.125
Seek new technical skills quarterly	3.125
Anticipate materials used	3.000
Follow color techniques	3.000
Initiate salon ordering	2.875
Appreciate beauty	2.875
Maintain equipment	2.857
Deal with supply companies and salesmen	2.750
Follow hair shaping techniques	2.750
Follow styling techniques	2.750
Complete state forms	2.625
Seek advice	2.375
File tax statements	2.250
Establish workable budget	1.750
Relate to ph scale	1.625

Appendix 3A (continued)

Instructor Group B
List of Behaviors Ordered by Mean Ratings (N = 39)

Important Affective Behaviors (N = 35)	Mean
Adopt good work habits	5.000
Assist clients with service	5.000
Comply with Minnesota state laws	5.000
Consult with client	5.000
Establish trust with clients	5.000
Listen to clients' requests	5.000
Respect clients' feelings during services	5.000
Treat clients with respect	5.000
Appreciate clients	4.857
Attend to details	4.857
Establish sound work ethic	4.857
Respect safety rules	4.857
Respect clients' feelings during complaints	4.857
Anticipate clients' needs	4.714
Encourage positive communication	4.714
Encourage clients	4.714
Respect manager	4.714
Promote professionalism	4.714
Care for equipment	4.571
Care for tools	4.571
Cooperate with co-workers	4.571
Respect co-workers' feelings	4.571
Support co-workers	4.429
Respect salon policies	4.333
Establish clients	4.286
Participate in development of skills	4.286
Care for records	4.143
Initiate clients' services	4.143
Participate in salon sanitation	4.000
Preserve professionalism	4.000
Adapt to salon policies	3.857
Tolerate differences	3.857
Accept compliments graciously	3.714
Accept constructive criticism	3.714
Encourage co-workers	3.571

Other Behaviors (N = 4)	Mean
Reciprocate with assistance	3.429
Share information	3.429
Share equipment with co-workers	3.429
Share customers	

Appendix 3A (continued)

Employer Group E
List of Behaviors Ordered by Mean Ratings (N = 25)

Important Affective Behaviors (N = 21)	Mean
Listen to client	5.000
Respect clients' feelings	5.000
Respect clients' feelings during complaints	5.000
Maintain client rapport	4.875
Respect clients' choices	4.875
Keep client information confidential	4.500
Exhibit concern for quality	4.500
Encourage courtesy	4.500
Tolerate differences	4.375
Attend to details	4.250
Dress self fashionably	4.125
Comply with salon rules	4.125
Cooperate with co-workers	4.125
Attend education classes	4.000
Promote fashion	4.000
Initiate salon cleanliness	4.000
Demonstrate interest	4.000
Follow manager's instructions	3.875
Share knowledge with customers	3.750
Record client services	3.625
Establish salon goodwill	3.500

Other Behaviors (N = 4)	Mean
Share information with co-workers	3.375
Care for equipment	3.375
Allow flexible appointments	3.000
Share equipment with co-worker	2.625

APPENDIX 3B

LIST OF MACHINISTS BEHAVIORS ORDERED BY MEAN RATINGS

Instructor Group A
List of Behaviors Ordered by Mean Ratings (N = 82)

Important Affective Behaviors (N = 31)	Mean
Respect supervisors	5.00
Respect safety rules	5.00
Exhibit good attendance	4.88
Care about quality	4.88
Listen to foreman	4.88
Promote quality	4.78
Respect machinery	4.78
Communicate with supervision	4.77
Demonstrate honesty	4.77
Cooperate with co-workers	4.77
Display pride in workmanship	4.66
Respect employers	4.55
Follow directions	4.44
Consider others	4.44
Demonstrate pride in work	4.34
Accept constructive criticism	4.33
Attend to details	4.33
Demonstrate neatness	4.22
Accept responsibility	4.22
Display professionalism	4.00
Foster personal hygiene	3.89
Accept criticism	3.88
Comply with rules	3.78
Forgive fellow workers	3.78
Care for equipment	3.66
Demonstrate pride in the company	3.66
Display patience	3.56
Care for company property	3.55
Care for tools	3.55
Interact with co-workers	3.55
Change as needed	3.55

Other Behaviors (N = 51)	Mean
Encourage ideas	3.44
Maintain a regular effort	3.44
Learn from others	3.33
Demonstrate and practice safety	3.33
Orientate to future growth	3.33
Appreciate advice	3.33
Avoid horseplay	3.22
Learn from errors	3.22
Maintain product quality	3.22

Appendix 3B (continued)

Other Behaviors (N = 51)	Mean
Invite opinions	3.00
Care for blueprints	3.00
Tolerate other work shifts	3.00
Practice objectivity	3.00
Share ideas	3.00
Appreciate accuracy	2.89
Expand work skills	2.89
Care for products	2.89
Praise others	2.89
Care for documents	2.88
Share experiences	2.78
Initiate improvements	2.77
Maintain product consciousness	2.77
Comply with teacher instructions	2.77
Seek action	2.67
Meet deadlines	2.67
Share equipment	2.55
Resolve problems	2.44
Demonstrate happiness	2.33
Exhibit forethought	2.33
Use systematic approach	2.33
Contribute to class participation	2.33
Teach others	2.33
Admit failure	2.33
Observe instructor demos	2.22
Anticipate problems	2.11
Organize work sequence	2.11
Understand measurements	2.11
Observe others	2.00
Comply with dress code	2.00
Offer advice	2.00
Discuss methods of setups	1.89
Understand mechanical principles	1.89
Simplify on-going tasks	1.89
Understand drawings	1.88
Consider alternative action	1.78
Understand cutting tools	1.55
Consult counselors	1.44
Anticipate set-up problems	1.33
Exhibit knowledge of metals	1.33
Give advice to others	1.22
Exhibit knowledge of machine operation	1.11

Appendix 3B (continued)

Instructor Group B

List of Behaviors Ordered by Mean Ratings (N = 103)

Important Affective Behaviors (N = 54)	Mean
Follow oral directions	4.75
Promote safe environment	4.75
Promote quality	4.62
Listen to co-workers	4.50
Cooperate with boss	4.50
Listen to supervisor	4.50
Cooperate with fellow employees	4.38
Establish work ethics	4.37
Observe safety procedures	4.37
Accept decisions	4.37
Contribute to company success	4.25
Display willingness to learn	4.25
Accept change	4.25
Exhibit positive attitude	4.13
Respect safety procedures	4.12
Accept authority	4.12
Communicate with supervision	4.12
Show ambition	4.12
Demonstrate safety awareness	4.12
Communicate with co-workers	4.12
Demonstrate positive work habits	4.00
Resolve problems	4.00
Promote positive attitude	4.00
Change with technology	4.00
Display cleanliness	4.00
Follow procedures	3.88
Resist being tardy	3.87
Resist skipping days	3.87
Exhibit neatness	3.87
Avoid repeating rumors	3.87
Seek help from supervisor	3.87
Follow directions	3.87
Display craftsmanship	3.75
Comply with standards	3.75
Tolerate employees	3.75
Attend to details	3.75
Support profit motives	3.75
Display pride for products	3.75
Resist using drugs	3.62
Heed print tolerances	3.62
Care for tools/machines	3.62
Initiate ideas	3.50

Appendix 3B (continued)

Important Affective Behaviors (N = 54)	Mean
Respect differences	3.50
Offer co-workers assistance	3.50
Display accuracy	3.50
Consult supervisor	3.50
Comply with safety rules	3.50
Exhibit pride	3.50
Share shop procedures	3.50
Listen effectively to others	3.50
Contribute suggestions/ideas	3.50
Reciprocate tools	3.50
Reciprocate information	3.50
Consult co-workers	3.50

Other Behaviors (N = 49)	Mean
Share experiences	3.37
Share information	3.37
Contribute to shop	3.37
Contribute to company	3.37
Demonstrate leadership	3.37
Share machine tools/equipment	3.37
Share ideas	3.25
Anticipate problems	3.25
Establish a clean work environment	3.25
Listen to apprentices	3.12
Follow operation sequence	3.12
Participate in shop discussions	3.12
Avoid operation errors	3.12
Love country	3.12
Simplify work	3.12
Motivate apprentices	3.12
Argue constructively	3.00
Care for prints	2.87
Establish new procedures	2.87
Uphold workers' rights	2.87
Discuss methods	2.87
Demonstrate ability to make decisions	2.87
Willingness to work overtime	2.87
Relate job progress	2.87
Resolve indifferences	2.82
Encourage apprentices	2.75
Interpret print dimensions	2.75
Simplify procedures	2.75
Communicate with customers	2.75
Consider time restraints	2.75
Motivate employees	2.75
Anticipate problems	2.62

Appendix 3B (continued)

Other Behaviors (N = 49)	Mean
Determine finish requirements	2.62
Praise co-workers	2.62
Offer opinions	2.62
Study blueprints	2.50
Maintain work space	2.50
Observe co-workers	2.37
Observe cutting action	2.25
Meet with customers	2.12
Respect power of equipment	2.12
Attend trade seminars	1.88
Attend seminars	1.75
Initiate maintenance program	1.75
Join trade society	1.63
Clean equipment	1.50
Contribute to part design	1.50
Keep complete notes	1.24
Assist in cost estimating	1.13

APPENDIX 4A

LIST OF DISCRETE COSMETOLOGY AFFECTIVE BEHAVIORS (N = 39)

(3.5 ratings and above)

Behaviors	%	N	Subject Group A	B	E
Maintain client rapport			X	X	X
Listen to clients			X	X	X
Respect clients' feelings			X	X	X
Cooperate with co-workers			X	X	X
Attend to details			X	X	X
Tolerate differences			X	X	X
	15	6			
Care of equipment			X	X	
Care of records			X	X	
Anticipate clients' needs			X	X	
Consult with clients			X	X	
Motivate others			X	X	
Respect co-workers			X	X	
Accept suggestions			X	X	
Participate in upgrading skills			X	X	
Comply with state law			X	X	
Promote professionalism			X	X	
Promote safety and sanitation			X	X	
	28	11			
Exhibit ethical behavior			X		X
Promote the salon			X		X
	5	2			
Assist co-workers			X		
Encourage hairstyle change			X		
Care for clients' comfort			X		
Cooperate with clients			X		
Greet clients			X		
Consult with co-workers			X		
Accept duties			X		
Avoid gossip			X		

Appendix 4A (continued)

Behaviors	%	N	Subject Group A	B	E
Encourage personal hygiene			X		
Follow instructions			X		
	26	10			
Assist clients with decisions				X	
Encourage clients				X	
Encourage positive communication				X	
Accept compliments				X	
Respect manager				X	
Adapt to salon policies				X	
Adopt good work habits				X	
	18	7			
Encourage courtesy					X
Promote fashion					X
Demonstrate interest					X
	8	3			

APPENDIX 4B

LIST OF DISCRETE MACHINIST AFFECTIVE BEHAVIORS (N = 41)

(3.5 ratings and above)

Behaviors	%	N	Subject Group A	Subject Group B
Respect safety rules			X	X
Exhibit good attendance			X	X
Care about quality			X	X
Cooperate with boss			X	X
Promote quality			X	X
Care for equipment			X	X
Consult supervisor			X	X
Cooperate with co-workers			X	X
Display pride in workmanship			X	X
Follow directions			X	X
Attend to details			X	X
Demonstrate neatness			X	X
Demonstrate pride in company			X	X
Display patience			X	X
Change as needed			X	X
	36	15		
Respect supervisors			X	
Demonstrate honesty			X	
Display professionalism			X	
Respect employers			X	
Consider others			X	
Accept constructive criticism			X	
Accept responsibility			X	
Forgive fellow co-workers			X	
	20	8		
Listen to co-workers				X
Establish work ethics				X
Accept decisions				X
Contribute to company success				X
Display willingness to learn				X

Appendix 4B (continued)

Behaviors	%	N	Subject Group A	Subject Group B
Accept authority				X
Resolve problems				X
Avoid repeating rumors				X
Comply with standards				X
Resist using drugs				X
Heed print tolerances				X
Respect differences				X
Offer co-workers assistance				X
Exhibit pride				X
Share shop procedures				X
Contribute suggestions/ideas				X
Reciprocate tools				X
Consult co-workers				X
	44	18		

APPENDIX 5A

FREQUENCY OF OBJECT AND VERB USAGE WITHIN COSMETOLOGY AFFECTIVE BEHAVIORS

(3.5 ratings and above)

	Group				Group		
Objects N = 60	A	B	E	Verbs N = 44	A	B	E
Clients	7	6	1	Attend	5	1	2
Co-workers	6	3	1	Comply	2	1	1
Details	3	1	1	Cooperate	3	1	1
Differences	1	1	1	Encourage	3	3	1
Feelings	2	3	2	Establish	1	3	1
Rules	4	1	1	Initiate	1	1	1
Services	2	1	1	Listen	2	1	1
				Promote	4	1	1
Equipment	1	1		Respect	6	6	3
Ethics	1	1		Tolerate	2	1	1
Laws	1	1					
Manager	1	1		Accept	3	2	
Needs	1	1		Adapt	1	1	
Professionalism	1	2		Anticipate	1	1	
Records	2	1		Assist	2	1	
Sanitation	2	1		Care	6	3	
				Consult	3	1	
Instructions	1		1	Support	1	1	
Interest	1		1				
Rapport	1		1	Demonstrate	1		1
Self	1		1	Exhibit	1		1
				Follow	1		1
Appointments	1			Maintain	1		1
Change	3			Share	1		1
Complaints	2						
Documents	1			Avoid	1		
Duties	2			Comfort	1		
Employees	1			Consider	1		
Gossip	1			Display	1		
Hygiene	1			Document	1		
License	1			Educate	1		

Appendix 5A (continued)

Objects N = 60	Group A	Group B	Group E	Verbs N = 44	Group A	Group B	Group E
Opinions	1			Greet	1		
Others	2			Interact	1		
Personality	1			Motivate	3		
Phone	1			Observe	1		
Procedures	1			Offer	1		
Promptness	1			Perform	2		
Responsibility	2			Resolve	2		
Sales	1			Uphold	1		
Salon	1						
Shows	1			Adopt		1	
Staff	1			Appreciate		1	
Suggestions	1			Participate		2	
Supervisors	2			Preserve		1	
Schedules	1			Treat		1	
Communications		1		Dress			1
Compliments		1		Keep			1
Criticism		1		Record			1
Development		1					
Habits		1					
Policies		2					
Requests		1					
Tools		1					
Trust		1					
Choice			1				
Classes			1				
Cleanliness			1				
Concern			1				
Courtesy			1				
Fashion			1				
Goodwill			1				
Information			1				
Knowledge			1				
TOTAL	69	35	21	TOTAL	69	35	21

APPENDIX 5B

FREQUENCY OF OBJECT AND VERB USAGE WITHIN MACHINIST AFFECTIVE BEHAVIORS

(3.5 ratings and above)

Objects N = 53	Group A	Group B	Verbs N = 34	Group A	Group B
Co-workers	2	3	Accept	3	3
Details	1	1	Attend	1	1
Directions	1	2	Care	4	1
Employees	1	2	Change	1	1
Neatness	1	1	Communicate	1	2
Others	1	1	Comply	1	2
Pride	3	2	Cooperate	1	2
Professionalism	1	1	Demonstrate	4	2
Quality	2	1	Display	3	5
Rules	2	1	Exhibit	1	3
Supervisor	2	4	Follow	1	3
Tools	1	2	Listen	1	3
			Promote	1	3
Attendance	1		Respect	4	2
Criticism	2				
Equipment	1		Consider	1	
Foreman	1		Forgive	1	
Honesty	1		Foster	1	
Hygiene	1		Interact	1	
Machinery	1				
Needed	1		Avoid		1
Patience	1		Consult		2
Property	1		Contribute		2
Responsibility	1		Establish		1
Workers	1		Heed		1
			Initiate		1
Accuracy		1	Observe		1
Ambition		1	Offer		1
Assistance		1	Reciprocate		2
Attitude		2	Resist		3
Authority		1	Resolve		1

Appendix 5B (continued)

Objects N = 53	Group A	Group B	Verbs N = 34	Group A	Group B
Awareness		1	Seek		1
Boss		1	Share		1
Change		1	Show		1
Cleanliness		1	Support		1
Craftsmanship		1	Tolerate		1
Decisions		1			
Differences		1	TOTAL	31	54
Drugs		1			
Environment		1			
Ethics		1			
Habits		1			
Ideas		1			
Ideas/Suggestions		1			
Information		1			
Motives		1			
Problems		1			
Procedures		4			
Rumors		1			
Skipping		1			
Standards		1			
Success		1			
Tardy		1			
Technology		1			
Tolerances		1			
TOTAL	31	54			